

WHAT IS CLAIMED IS:

1. A tool for impinging material wherein the tool is connected to a rotating drum, the tool comprising:

an elongate tool body having opposite ends, the elongate tool body  
5 being connected at one end thereof to the rotating drum, and the elongate tool body having a distal end opposite to the one end;

a wear pad including a central pad body having an impingement face and an opposite attachment face, at least a pair of flanges extending away from the attachment face, and each one of the flanges having an interior flange  
10 surface;

the wear pad being attached to the elongate tool body at the distal end thereof;

at least a portion of the flange interior surfaces and at least a portion of the attachment face being in close contact with the elongate tool body;  
15 and

the wear pad having a wear-resistant volume beginning near and extending inwardly from the impingement face thereof, and the wear-resistant volume containing hard particles.

2. The tool for impinging material of claim 1 wherein the  
20 impingement face includes a plurality of the hard particles.

3. The tool for impinging material of claim 2 wherein the impingement face having between about 65 percent and about 90 percent of the surface area thereof covered with the hard particles.

4. The tool for impinging material of claim 2 wherein the  
25 impingement face having at least about 80 percent of the surface area thereof covered with the hard particles.

5. The tool for impinging material of claim 1 wherein the wear-resistant volume containing between about 75 weight percent and about 95 weight percent hard particles.

6. The tool for impinging material of claim 1 wherein the central  
5 pad body further including at least a pair of opposite side edges, and each one of the integral flanges being contiguous with its corresponding one of the side edges.

7. The tool of impinging material of claim 6 wherein the elongate tool body having a head portion, and the head portion having opposite side surfaces and a lower surface.

10 8. The tool for impinging material of claim 7 wherein the flange interior surface of one of the flanges being in close contact with one of the side surfaces of the head portion, the flange interior surface of the other of the flanges being in close contact with other of the side surfaces of the head portion, and the attachment face of the wear pad being in other opposite close contact with the  
15 lower surface of the head portion.

9. The tool for impinging material of claim 6 wherein each one of the side edges and the impingement face intersect to form cutting edges.

10. The tool for impinging material of claim 1 wherein the wear pad being attached to the elongate tool body by welding.

20 11. A tool for impinging material wherein the tool is connected to a rotating drum, the tool comprising:

an elongate tool body having opposite ends, the elongate tool body being connected at one end thereof to the rotating drum, and the elongate tool body having a distal end opposite to the one end;

25 a wear pad including a central pad body, the central pad body having an impingement face and an opposite attachment face, the central pad body

further including a pair of opposite side edges, at least a pair of integral flanges, each one of the integral flanges being contiguous with its corresponding one of the side edges, and the integral flanges extending away from the attachment face, and each one of the integral flanges having an interior flange surface;

5                   the wear pad being attached to the elongate tool body at the distal end thereof;

                  at least a portion of the flange interior surfaces and at least a portion of the attachment face surface being in close contact with the elongate tool body; and

10                  the wear pad having a wear-resistant volume beginning near and extending inwardly from the impingement face thereof, and the wear-resistant volume containing hard particles.

                  12. The tool of impinging material of claim 11 wherein the elongate tool body having a head portion, and the head portion having opposite  
15                  side surfaces and a lower surface.

                  13. The tool for impinging material of claim 12 wherein the flange interior surface of one of the flanges being in close contact with one of the side surfaces of the head portion, the flange interior surface of the other of the flanges being in close contact with the other opposite side surface of the head portion, and  
20                  the attachment face of the wear pad being in a close contact with the lower surface of the head portion.

                  14. The tool for impinging material of claim 11 wherein each one of the side edges and the impingement face intersect to form cutting edges.

                  15. A tool for impacting material wherein the tool is connected to a  
25                  rotating drum, the tool comprising:

                  an elongate tool body having opposite ends, the elongate tool body

being connected at one end thereof to the rotating drum, and the elongate tool body having a distal end opposite to the one end;

5 a wear pad including a central pad body having an impingement face and an opposite attachment face, at least a pair of flanges extending away from the attachment face, and each one of the flanges having an interior flange surface;

the wear pad being attached to the elongate tool body at the distal end thereof so that:

10 at least a portion of two of the flange interior surfaces and at least a portion of the attachment face being in close contact with the elongate tool body; and

a space defined between at least a portion of the flange interior surfaces and at least a portion of the attachment face being occupied by a portion of the elongate tool body at the distal end of the elongate tool body;

15 the wear pad having a wear-resistant volume beginning near and extending inwardly from the impingement face thereof, and the wear-resistant volume containing hard particles.

20 16. The tool of impinging material of claim 15 wherein the elongate tool body having a head portion, and the head portion having opposite side surfaces and a lower surface.

25 17. The tool for impinging material of claim 16 wherein the flange interior surface of one of the flanges being in close contact with one of the side surfaces of the head portion, the flange interior surface of other of the flanges being in close contact with the other opposite side surface of the head portion, and the attachment face of the wear pad being in close contact with the lower surface of the head portion.

18. The tool for impinging material of claim 15 wherein each one of the side edges and the impingement face intersect to form cutting edges.

19. The tool for impinging material of claim 15 wherein the impingement face includes a plurality of the hard particles.

5                   20. A tool for impinging material wherein the tool for impinging material is connected to a rotating drum, the tool for impinging material comprising:

an elongate tool body having opposite ends, the elongate tool body being connected at one end thereof to the rotating drum, and the elongate tool  
10 body having a distal end opposite to the one end, and the elongate tool body having a head portion adjacent to the distal end thereof;

a cast wear pad including a central pad body having an impingement face and an opposite attachment face, at least a pair of integral flanges extending away from the attachment face, and each one of the flanges  
15 having an interior flange surface;

the cast wear pad being welded to the elongate tool body at the distal end thereof;

at least a portion of two of the flange interior surfaces and at least a portion of the attachment face being in close contact with the head portion of the  
20 elongate tool body; and

the cast wear pad having a wear-resistant volume beginning near and extending inwardly from the impingement face thereof, and the wear-resistant volume containing hard particles cast therein wherein the wear-resistant volume extends to a selected depth in the cast wear pad from the impingement face.

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